

Land Survey Specifications

Natural Resources Conservation Service

Easement Programs

1. SCOPE

A professional land surveyor (Surveyor) licensed and registered in the state where the survey is to take place shall complete all boundary surveys for the Natural Resources Conservation Service (NRCS) Easement Programs. The survey work shall consist of performing all surveys, measurements, computations, drawings, and descriptions required by this specification.

2. QUALITY OF WORK

The easement boundary description shall be clear, accurate, complete, and meet the NRCS's intent.

All work shall follow recognized professional practice and meet the accuracy specifications and positional tolerances as set forth in the regulations of the state where the survey is to take place. Longitude and latitude will be provided for each property corner. Access shall be surveyed, but no monumentation of the access route is required. The Surveyor will show both the easement and the ingress/egress route to a publicly dedicated right-of-way. The work and data presented shall be in accordance to appropriate state minimum standards for the practice of rural land surveying.

All notes, sketches, computations, and other data shall be complete, legible, and organized in a manner that will allow reproduction of copies. The Surveyor shall record and provide to the contracting officer the type, name, model of survey equipment used and any computer software identification, vendor's name, and other pertinent data used in performing the work.

3. NOTIFICATION OF INTENT TO SURVEY

Prior to the start of survey field work the NRCS will schedule a pre-survey site visit. Attending will be the Surveyor, the NRCS Program Manager or the local District Conservationist (DC) and the landowner or the landowner's representative. During the pre-survey site visit the proposed easement boundaries will be reviewed, as will the easement access route (if the easement is not adjacent to a publicly dedicated right-of-way).

The NRCS Program Manager or the DC will provide the Surveyor with a preliminary title search and location map or aerial photograph of the proposed Wetlands Reserve Program (WRP), Floodplain Program Easement (FPE) area. The map will include the area to be surveyed, the ingress/egress route(s) or point of access and any other descriptive information as may be available.

Before fieldwork for surveying begins, the Surveyor shall notify the DC and the landowner the date and time for conducting the survey. Notification shall be a minimum

of 72 hours prior to beginning work. If the work is not started on the planned date, the surveyor shall notify the DC and landowner of the revised date and time that work will begin.

4. SURVEY AREA

The area to be surveyed will be marked by wooden stakes or flags. Only boundary angle points should be staked or flagged. For identification purposes, angle points are to be identified by number on the photograph and on the corresponding wooden stakes or flags. Any significant (more than 5 percent) variation in the acres surveyed should be reported to the contracting officer's representative (COR) immediately. The surveyor will not modify the easement area surveyed at the direction of the landowner. The boundary of the easement area must not be changed from what is indicated. Only the NRCS Contracting Office may authorize a modification to the easement area boundary. Any variations in the number of acres surveyed should be reported to the Contracting Officer immediately. Any questions regarding the easement area should be directed to the Contracting Officer. The Contracting Officer may appoint an official Contracting Officer's Representative (COR) to represent them in the field.

The surveyor shall locate the boundary angle points and record the description using bearings and distances as referenced to the National Spatial Reference System. The boundary survey shall be a complete traverse of the area tied to a corner of a Public Land Survey or a corner of a recorded property. A latitude and longitude coordinate shall be collected for each of the points using North American Datum 1983 (NAD 83) with a ± 1 meter accuracy.

Monuments and witness posts with signs shall be installed by the Surveyor at the time the survey is completed. Monuments and witness posts with signs shall be installed at each corner, angle point, road crossing, intersection of property lines and approximately every 500 feet along a tangent. All monuments must be thoroughly described and specifically identified as set or found, whenever shown on maps or referred to in documents prepared by the Surveyor. Descriptions of monuments must be sufficient in detail to readily facilitate future recovery by other Surveyors and to enable positive identification.

An acceptable monument will be a 5/8" steel rebar rod. The minimum length for the monument will be 24 inches long. The monument shall be driven just below the ground surface. Caps (approved by NRCS) shall be placed on each marker.

The Surveyor shall provide witness posts. Witness posts shall be a steel "U" channel post at least seventy-eight (78) inches in length and have a minimum weight of 1.25 lbs per foot. Posts shall be of a natural color, preferably green. NRCS will provide the signs. The Surveyor will be required to pick up the signs at the local NRCS office. The Contractor is required to attach a NRCS boundary sign, to the top of each witness post using a galvanized nut and bolt. A wire attachment is not acceptable. The NRCS easement signs have two 3/8 inch drilled holes.

Upon completion, the Contractor will contact the local NRCS DC to certify the work has been completed in accordance with the NRCS Statement of Work. This certification will be made prior to any reimbursement to the Contractor.

Some easement boundaries may be a river, creek, bayou, or lake. In those cases, the easement boundary will be determined on a case by case basis. An on-site clarification of this boundary shall be determined by the surveyor, DC, and landowner. A description point shall be included for the boundary intersection points. An offset point may need to be established on each boundary line intersecting river, creek, bayou or lake boundary. The offset point shall have a permanent marker, whereas the river, creek, bayou, or lake boundary intersection point may not. The offset and the permanent markers allow for a visual marker on the ground for use in maintaining the boundary integrity. Visibility and potential stream encroachment shall be factors in locating the offset. The offset distance shall be in whole feet.

Excluded areas within the main boundary area shall be surveyed as described above. All private/ public roads (and associated roadway easement) should be excluded from the main WRP/FPE boundary area. The net WRP/FPE easement area shall be reported by the surveyor and computed by subtracting the excluded areas from the main boundary area. The net WRP/FPE easement area shall be computed to the nearest tenth of an acre.

The boundary description shall include a delineated route of ingress/egress. The ingress/egress route to the WRP/FPE easement area will be described in the survey, shown on the survey plat, and recorded with the Warranty Easement Deed.

When the boundary survey is complete, the DC and the landowner will ensure that: (1) the area delineated with permanent markers was the area that the landowner intended to place under easement and (2) permanent markers have been installed as required. If a discrepancy is identified, the surveyor will be required to meet with the DC and landowner to reconcile the difference.

5. PRESENTATION OF SURVEY

The Surveyor shall prepare an appropriately scaled drawing of the survey. The Surveyor shall provide an original and three 11 X 17 copies of the survey plat (and attachments which include the legal description and access description) to the COR. The Surveyor is not to provide a copy of the plat without the approval of the contracting officer

The survey drawing shall, at a minimum, include the following items:

The surveyor's seal shall be affixed to the drawing, and shall be signed and dated by the surveyor in blue ink across the seal;

Latitude and longitude for the point of beginning;

The record description of the property or the reference to the source of the recorded description on the property of which the easement is located on;

The survey description of the easement area as Attachment A to the survey;

The survey description of the route of ingress/egress to the subject property as Attachment B to the survey and shown on the survey plat;

North arrow;

Scale;
Bearings, azimuth or angles, and the distances for all courses;
The central angle, length of curve and radius and the length and bearing of chord from the beginning to the end of curve for each common boundary line or individual boundary line;
Basis of bearings or azimuth;
Monuments identified as set or found along with a description of the monument;
Area of the surveyed easement;
Observed evidence of possession or use by others in the parcel or across any perimeter lines of the property;
Sufficient data to indicate the theory of location applied in formulating the opinions as to the probable location of the boundaries and corners of the property;
Name, registration number, address and phone number of the Surveyor;
Client name;
Date survey completed;
NRCS Contract number (in the legend of the survey plat);
NRCS Property application number;
Certification- The following statement must be include on each survey:
"THIS IS TO CERTIFY THAT THIS SURVEY, DONE BY THE UNDERSIGNED, WAS DONE ON THE GROUND IN ACCORDANCE WITH THE MOST RECENT MINIMUM STANDARDS FOR PROPERTY BOUNDARY SUVEYS- AS SET FORTH BY THE (insert name of state agency responsible for licensing surveyors). THE ACCURACY AND POSITION TOLERANCE ARE ALSO IN ACCORDANCE WITH RURAL SURVEYS.

The following shall be included in the legal description (as Attachment A to the survey plat) of the property:

A clear statement of the relationship between the described property and the survey control or the basis of the unique location;
The basis of bearings when bearings are used;
Metes and bounds shall include bearings or angles and distances in order to allow for the computation of mathematical closure;
Citations to the recording information or other identifying documentation for any maps, plats or other documents referenced;
Detailed description of any natural or artificial monument referenced.

6. DELIVERABLES

Survey contractor will deliver to the Contracting Officer within 45 days of issuance of the task order the following:

Original completed survey (34" x 24") with required seal and signature.

Three copies (11" x 17") of survey plat for completed survey.

One electronic (digital) copy of the easement survey – The contractor shall provide a CD or DVD containing the digital files in .dwg format compatible with AutoCad 2000.

The.dwg file will be referenced to the appropriate State Plane Coordinate System, North American Datum 1983, local zone, U.S. Survey Feet and basis of bearing to grid north.

The perimeter of the easement should be attributed as a separate and extractable polyline layer or polygon feature component of the drawing for conversion to a geographic information system (GIS). The electronic copy of the easement survey shall include:

Documentation regarding registration of the survey to a standard coordinate system based on measurements referenced to the National Spatial Reference System infrastructure with a minimum of two (2) tie points to the United States Public Land Survey System within the parcel's section.

Documentation identifying which coordinate system is used (for example: MO Coordinate System of 1983, West Zone, NAD 83 horizontal datum, survey units – U.S. Survey Foot).

All polygons should be labeled as indicated below:

- Each polygon should contain four attributes
 - NRCS assigned agreement number
 - Easement Acres (value to the tenth of an acre)
 - The length of the contract in years
 - The method of data capture
- Each polygon should have the following Metadata:
 - Date generated
 - GIS specialist contact information
 - Software and version used to generate file
 - Brief description of process used to generate files
- Format. Provide ESRI ARC Info export/Info export (.e00) or shapefile (.shp, .dbf, .shx)
- Projection must be clearly defined. If not geographic projection, the following is required:
 - Projection (NAD 83)
 - Units
 - Datum
 - Spheroid
 - Xshift
 - Yshift
 - Central meridian
 - 1st standard parallel
 - 2nd standard parallel
 - Latitude of projection
 - False easting
 - False northing
- Geospatial/Data joining. Identify the data fields required to join the spatial data to the database.

7. Conflict Of Interest

A Surveyor will not survey a NRCS easement property for a spouse, child(ren), partner(s), or business associate(s), nor have a financial interest in the property to be covered by the proposed easement.

8. Non-Disclosure

Work performance required by this SOW will involve access to potentially sensitive information about governmental and landowner issues. All Contractor personnel must comply with the terms of AGAR 452.224-70, Confidentiality of Information, as well as provisions of the Privacy Act of 1974, 5 U.S.C 552a. Additionally, the Contractor's

employees shall comply with privacy of personal information relating to Natural Resources Conservation Service programs in accordance with Section 1244 Title II of the Farm Security and Rural Investment Act of 2002 (P.L. 1078-171).

9. Civil Rights and Program Delivery

The Contractor will ensure that personnel prohibit discrimination in all aspects of programs and activities related to the Contract on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status.